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Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D. C. 20554

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FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF THE SECRETARY

In the Matter of: )  
)  
Federal-State Joint Board on Universal )  
Service )  
)  
Forward-Looking Mechanism for High )  
Cost Support for Non-Rural LECs )

CC Docket No. 96-45  
CC Docket No. 97-160  
DA 98-848

REPLY OF GTE

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## **SUMMARY**

With the exception of AT&T and MCI, the commenters had consistent views on the issues raised in the Bureau's Public Notice. For example, the majority of the parties agreed that an accurate source of geocode data for rural areas is not currently available. In addition, parties confirmed that the use of global positioning satellites (GPS) to enhance geocode data in rural areas is not a cost-effective means of determining customer location.

Similarly, the consensus among the parties filing comments was that all housing units, both occupied and unoccupied, should be used as the basis of calculating universal service support since this is more consistent with ILECs' carrier-of-last resort obligations. Several parties agreed that the use of a maximum 12,000 foot copper loop length is more consistent with the provision of advanced services to rural customers, and no party contradicted GTE's evidence that an 18,000 foot length would deprive customers of the full use of dial-up modems and the opportunity to receive advanced services. Aside from AT&T and MCI, no party supported use of the Commission's depreciation ranges. Rather, the record clearly supports the use of economic lives, as AT&T and MCI themselves use.

With respect to the appropriate costs of outside plant, several parties agreed that outside plant costs should, at a minimum, incorporate geographic variances across the country with regard to terrain and labor and material costs. The use of national default values in a cost proxy model will not result in a representative and accurate level of universal service funding across states and will not ensure sufficient support. Finally,

the Commission should consider what benchmark is most appropriate in the context of the proceeding that has already begun examining this issue.

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**REPLY OF GTE**

GTE Service Corporation and its affiliated domestic telephone operating companies (collectively "GTE")<sup>1</sup> respectfully submit their Reply to the Common Carrier Bureau's Public Notice in the above-captioned proceedings.<sup>2</sup> As several commenters show, the customer location algorithm and input values used in the HAI Model seriously underestimate the costs of providing universal service. In contrast, BCPM does a substantially better job at estimating the costs of providing service. Therefore, GTE urges the Commission to adopt a BCPM-based cost proxy model with carrier-specific inputs by state.

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<sup>1</sup> GTE Alaska, Incorporated, GTE Arkansas Incorporated, GTE California Incorporated, GTE Florida Incorporated, GTE Hawaiian Telephone Company Incorporated, The Micronesian Telecommunications Corporation, GTE Midwest Incorporated, GTE North Incorporated, GTE Northwest Incorporated, GTE South Incorporated, GTE Southwest Incorporated, Contel of Minnesota, Inc., GTE West Coast Incorporated, and Contel of the South, Inc.

<sup>2</sup> Common Carrier Bureau Requests Further Comment on Selected Issues Regarding the Forward-Looking Economic Cost Mechanism for Universal Service Support, CC Docket Nos. 96-45, 97-160 (Public Notice) (rel. May 4, 1998) ("Public Notice").

**I. THE COMMENTS CONFIRM THAT CURRENTLY AVAILABLE GEOCODING DATA WILL NOT PRODUCE AN ACCURATE MODEL OF CUSTOMER LOCATION.**

The overwhelming majority of commenters acknowledge that the geocoding data currently available do not produce accurate customer location information for rural areas. Although AT&T and MCI have recognized this fact in their ex parte submissions to the Commission,<sup>3</sup> they continue to claim that the HAI Model utilizes geocoded data to locate customers and that this method is superior to the grid cell approach used by BCPM. As several parties show, this is not the case. While the HAI Model does use geocoded data as part of its proprietary preprocessing (despite the inaccuracies of geocoding rural areas), the Model processes the information in such a way that it has little, if any, impact on the results. In contrast, the BCPM customer location algorithm produces a reasonably accurate picture of actual customer location. Further, although some parties cite additional sources of geocoding data, these sources suffer from many of the same problems as the databases used by the HAI Model and thus are unsuitable for use in a cost model.

**A. The geocoding data used in the HAI Model do not accurately represent actual customer locations.**

AT&T and MCI claim that the "street address-based geocode data currently used in the HAI is the best data set currently available and should be used for the areas it

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<sup>3</sup> Letter to Magalie Roman Salas from Chris Frentrup of MCI, CC Docket Nos. 96-45, 97-160 (filed Feb. 3, 1998).

covers.”<sup>4</sup> GTE disagrees. The geocode data and the modeling process used by HAI simply do not produce accurate results, especially for those rural areas most in need of universal service funding. Moreover, even if the combined databases currently used by the HAI Model represent the best data set available, this data set is not reliable.

As GTE showed in its Comments, the Metromail Inc. database that serves as a basis for the HAI Model’s *residential* customer base simply is not accurate enough to be used for universal service funding purposes.<sup>5</sup> First, no independent source has verified whether each record has a match-code indicator field or how many records with different street addresses have identical latitudes and longitudes, issues that clearly affect reliability. Second, the PNR documentation itself states that the Metromail database includes duplicate records, which can skew the results. Third, within a one month period, Metromail has reported conflicting address counts for its database.<sup>6</sup>

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<sup>4</sup> Comments of AT&T Corp. and MCI Telecommunications Corporation on Designated Input and Revenue Benchmark Issues, CC Docket Nos. 96-45, 97-160 at 5 (filed June 1, 1998) (“AT&T/MCI Comments”).

<sup>5</sup> Comments of GTE, CC Docket Nos. 96-45, 97-160 at 3-7 (filed June 1, 1998) (“GTE Comments”).

<sup>6</sup> As shown in Exhibit 1 to GTE’s Comments, on December 5, 1997, Metromail first reported 74.4 million named and unnamed address records for the 50 states. On December 23, 1997, Metromail updated this number to 98.2 million. Using these two estimates, a comparison was made to the 1996 Bureau of Census Data on a state-by-state basis. The results of this analysis, attached as Exhibit 1 hereto, illustrate that the Metromail database does not contain 100 percent of residential households as reported by the Census Bureau. (AT&T and MCI state that the database “contains over 90 percent of all household addresses in the United States.” AT&T/MCI Comments at 7.) The analysis in Exhibit 1 hereto indicates 67.8 percent and 89.4 percent respectively based on Metromail’s responses. A careful examination of this data further reveals that inherent problems may exist since only 75 percent of Hawaii’s households, but 103 percent of Oregon’s, are included – again raising serious reliability concerns.

Fourth, no in-depth analysis has been performed on any of the other databases<sup>7</sup> used by the HAI model. In particular, 1 million surrogate points had to be added to the Dun & Bradstreet business database to “shore” it up, raising concerns about the sources of this data.<sup>8</sup> Thus, the information upon which the HAI Model is relying has been shown to be inaccurate.

State commissions have confirmed that there are significant problems with the geocoded data used in the HAI Model. In a recent order, the South Carolina Public Service Commission stated that “the geocoding process is grossly inadequate for the large, rural areas that are at the core of this Commission’s universal service inquiry.... The Commission concludes that the Metromail database that HM 5.0a relies upon for ‘accurate’ geocoding is incomplete and cannot be reliably used to locate customers in rural areas.”<sup>9</sup> Moreover, even if these data were accurate, which they are not, several commenters, including GTE, have pointed out that the HAI Model does not actually use the geocode data in the manner the Model sponsors contend and thus gains no benefit from the use of these data.<sup>10</sup>

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<sup>7</sup> Dun & Bradstreet’s National Database, USPS ZIP+4 directory, and Geographic Data Technology’s enhanced street network files.

<sup>8</sup> HAI Model 5.0a Inputs Portfolio, § 5.3.2.

<sup>9</sup> South Carolina Public Service Commission Proceeding to Establish Guidelines for an Intrastate Universal Service Fund, Docket No. 97-239-C, Order No. 98-322 at 40-41 (May 6, 1998) (“South Carolina PSC Order”).

<sup>10</sup> Comments of the United States Telephone Association, CC Docket Nos. 96-45, 97-160 at 2 (filed June 1, 1998) (“USTA Comments”); Comments of Southwestern Bell Telephone Company, Pacific Bell, and Nevada Bell, CC Docket Nos. 96-45, 97-160 at i, 5 (filed June 1, 1998) (“SBC Comments”); GTE Comments at 5-6.



**B. Although alternative sources of geocode data may exist, none is sufficiently reliable or available for use in a cost proxy model.**

The Joint Comments of the BCPM sponsors present alternative methods of acquiring customer location data, such as E911 databases and the use of engineering maps to identify coordinates for terminal locations.<sup>11</sup> The use of E911 databases presents the same issues raised regarding the other databases used for customer location, including availability of data for rural areas and lack of latitude and longitude information. GTE's E911 database does not contain latitude and longitude information and there is no present requirement to obtain this information. Requirements for E911 vary by jurisdiction, with each jurisdiction making its own determination regarding acceptable address accuracy. The minimum requirement per household is typically a call-back number and an "approximate" geographic location. This location information is often the rural route and box number in rural areas and is the only location information populated in the E911 database. In Texas, "rural addressing" was never completed by county jurisdictions for the majority of its 254 counties. It should also be noted that rural addressing does not require a GPS collection of latitude and longitude and that therefore the addresses would still have to be processed through geocoding software to obtain coordinate information. In addition, since these new addresses

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<sup>11</sup> Joint Comments of BellSouth Telecommunications, Inc., U S WEST, Inc., and Sprint Local Telephone Companies to Common Carrier Bureau Request for Further Comment on Selected Issues Regarding the Forward-Looking Economic Cost Mechanism for Universal Service Support, CC Docket Nos. 96-45, 97-160 at 3 (filed June 1, 1998) ("Joint Comments").

would not be included in the geocoding software for a certain period after being updated by the county, those addresses would still not geocode. The use of engineering maps to identify the coordinates for terminal locations poses similar problems to that of collecting customer location information using GPS devices – the data collection process would be incredibly time- and labor-intensive. In this case, adequate data in the format required for use in a proxy model may not be maintained by the ILECs.

**C. BCPM's approach to customer location will produce more accurate results than the HAI Model.**

The main issues surrounding the selection of a customer location algorithm are (1) whether or not geocode data exist that are readily *available* and *reliable*, and (2) whether or not the model uses these data in a manner that produces *accurate* results. In addition to GTE, many parties state that accurate geocode data are not available, especially for the less populated areas, and that the use of GPS devices presents an incredibly expensive means of augmenting existing data sets.<sup>12</sup> Only AT&T and MCI claim that geocode data supplies “the most accurate and useful customer location

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<sup>12</sup> GTE Comments at 7-8; Joint Comments at i; SBC Comments at i; Comments of Puerto Rico Telephone Company, CC Docket Nos. 96-45, 97-160 at 4 (filed June 1, 1998); USTA Comments at 2; Comments of the Rural Utilities Service, CC Docket Nos. 96-45, 97-160 at 1-2 (filed June 1, 1998).

information,”<sup>13</sup> although MCI has conceded that the HAI Model 5.0a has had little success with geocoding rural customers.<sup>14</sup>

AT&T and MCI provide no evidence to support their statement that geocode data is preferable “to the flawed ‘grid cell’ approach advocated by the BCPM sponsors.”<sup>15</sup> As demonstrated in GTE’s Comments, the BCPM customer location algorithm, which utilizes the road network to place customers, is a more accurate alternative to the HAI Model’s purported use of geocode data.<sup>16</sup> Recent findings by the South Carolina Public Service Commission support GTE’s conclusion that BCPM’s customer location algorithm is superior to that used in the HAI Model. The South Carolina Commission has concluded that:

[A] cost proxy model like HM 5.0a that assumes that unknown people (surrogate geocoded locations) live on unknown roads (along the Census Block perimeter) simply cannot be the basis for calculating the investment needed to provide universal service in South Carolina.<sup>17</sup>

Because the Census Block road network is known with certainty and people tend to live along roads, BCPM 3.1’s algorithm yields a more accurate picture where telephone customers actually live in rural areas.<sup>18</sup>

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<sup>13</sup> AT&T/MCI Comments at 4.

<sup>14</sup> Letter to Magalie Roman Salas from Chris Frentrup of MCI, CC Docket Nos. 96-45, 97-160 (filed Feb. 3, 1998).

<sup>15</sup> AT&T/MCI Comments at 4.

<sup>16</sup> GTE Comments at 6.

<sup>17</sup> South Carolina PSC Order at 43-44.

<sup>18</sup> South Carolina PSC Order at 46.

The Commission concludes that BCPM 3.1's road-based customer-location methodology is superior to HM 5.0a's and, therefore, more accurately estimates the costs of providing Universal Service in South Carolina.<sup>19</sup>

The cost modeling process under review for universal service funding is designed to produce cost estimates at small geographic levels, such as at a wire center or below. Therefore, the methodology selected to locate customers in these geographic areas is critically important. A key factor in this determination is whether population or geography should be treated as a constant. GTE's analysis of the HAI Model 5.0 in several states shows that HAI Model "clusters" of customer locations as large as 15 to 20 square miles in total area are not unusual. In contrast, BCPM's "macrogrids," which are the largest areas for which BCPM designs outside plant, are only 6 square miles in total area. BCPM's grid square approach allows it to reflect more accurately the geographical dispersion of end users and to model the real-world diversity of outside plant. These differences have important consequences in the models' respective abilities to calculate costs. The HAI Model's "clustering" approach is inherently less accurate than BCPM's "grid cell" approach based on informed estimates of customer distribution within small, well-defined geographic units.

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GTE urges the Commission to use BCPM's methodology for customer location because it provides a reasonable approximation of customer location and clearly outperforms the HAI model in low-density zones.

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<sup>19</sup> South Carolina PSC Order at 46-47.

## **II. A COST PROXY MODEL SHOULD ACCOUNT FOR ALL HOUSEHOLDS, NOT JUST THOSE THAT CURRENTLY HAVE TELEPHONE SERVICE.**

As a number of commenters confirm, any cost proxy model must calculate network costs based on all housing units, rather than just occupied units with telephones.<sup>20</sup> In their Joint Comments, BellSouth, U S WEST, and Sprint emphasize that, although at any given time not all housing units require service, any existing unit can require service at any time. As carriers of last resort, ILECs must serve all customers in their areas, usually within a reasonably short period. Thus, ILECs must install and maintain network facilities for all housing units in their area, regardless of whether they are occupied. Accounting only for households that currently have telephones undermines the whole purpose of universal service – achieving 100 percent penetration so that all Americans have access to basic services and the opportunity to receive advanced services. Ignoring the costs of building and maintaining plant to households without telephones is an admission that current levels of penetration are the best attainable, a premise GTE does not accept.

AT&T and MCI argue that households should be defined as units with telephones – “the total number of customer locations and lines reflected in the HAI Model are consistent, both in number and geographic scope, to current household units

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<sup>20</sup> GTE Comments at 8-9; Joint Comments at 6-8; SBC Comments at 6-10; USTA Comments at 3.

with phones.”<sup>21</sup> Further, they state that only the “current” number of lines should be used for sizing the network, and that the geographic scope should be limited to areas “currently” served.<sup>22</sup> GTE disagrees with this position.

As the Bureau’s Public Notice states, the Census Bureau defines households as occupied housing units.<sup>23</sup> However, the Census serves a very different purpose from universal service funding. The Census Bureau’s objective is counting households and people – not designing a network to provide all Americans with telephone service. In addition, the Census Bureau is not attempting to project how many “households” or people needing service there will be at some future date; it is only concerned with numbers at the time the Census is taken. Thus, the Census Bureau’s definitions are not necessarily consistent with universal service objectives. In fact, these definitions obscure the fact that, at any point in time, there will always be a significant number of temporarily unoccupied dwellings. According to Census Bureau statistics, there were 116.8 million housing units in the U.S. in the first quarter of 1998. At the same time, there were 103.1 million occupied housing units, or “households” by the Census Bureau definition. The vacant housing units make up 11.7 percent, or 13.7 million, of the total housing units. Of these, 10.4 million or 76 percent were classified as year-round use.<sup>24</sup>

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<sup>21</sup> AT&T/MCI Comments at 8. Ameritech also supports the use households with telephones. Further Comments of Ameritech, CC Docket Nos. 96-45, 97-160 at 2 (filed June 1, 1998) (“Ameritech Comments”).

<sup>22</sup> AT&T/MCI Comments at 7.

<sup>23</sup> Public Notice at 5.

<sup>24</sup> United States Department of Commerce News, CB98-58 (Apr. 21, 1998).

A significant portion of these units is vacant pending rental turnover or real estate transfers. Tenants or buyers will expect to have telephone service in their new locations as soon as these rental or real estate transactions are completed. These facts conflict with AT&T's and MCI's position that many of these vacant housing units are vacation homes in rural areas that should not be included in universal service support decisions.

AT&T's and MCI's assertion that "it would be appropriate for the Commission to require all ILECs to report their own wire center boundary lines, and customer location and line counts within those boundaries"<sup>25</sup> would significantly increase the implementation costs associated with universal service. As GTE and other ILECs have explained numerous times, accurate and detailed customer location information does not exist, especially for the more rural areas, and the costs of gathering these data are prohibitive. If this information were readily available, there would be little need to consider algorithms.

### **III. A COST MODEL SHOULD INCORPORATE A MAXIMUM COPPER LOOP LENGTH OF 12,000 FEET.**

As GTE explained in its Comments, the 18,000 foot copper loop length used in the HAI Model is not a forward-looking technology and is inconsistent with the statutory goal of providing advanced services to customers in rural areas. Use of line cards to extend loops to this length would deprive rural customers of the advantages of today's

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<sup>25</sup> AT&T/MCI Comments at 8.

dial-up modems and limit the availability of advanced services.<sup>26</sup> Therefore, GTE urges the Commission to use the BCPM methodology, which is based on a maximum 12,000 foot loop and meets forward-looking design standards.

In their comments, AT&T and MCI state that “[t]he *standard* line card assumed by the HAI model is adequate for copper loop lengths up to 17,600 feet.”<sup>27</sup> They explain that the standard line card is adequate at 17,600 feet “because signal loss on customer lines driven by DSC Litespan-2000 RPOTS cards (the line cards assumed by both the BCPM and the HAI models) does not exceed 6.5 dB until the copper loop reaches 17,600 feet.”<sup>28</sup> However, this is not the case. The standard line card will only work at 17,600 feet under certain conditions (low loss buried or underground cable, zero bridged taps) and in most cases will not provide adequate service to customers.

ILECs have refuted these same arguments in detail in several recent state proceedings, including Minnesota<sup>29</sup> and Alabama.<sup>30</sup> John Donovan, a witness supporting the HAI Model, was cross-examined in Alabama regarding his Rebuttal Testimony and, in particular, the HAI Model assumption that a copper loop length of

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<sup>26</sup> GTE Comments at 9-15.

<sup>27</sup> AT&T/MCI Comments at 5 (emphasis in original).

<sup>28</sup> AT&T/MCI Comments at 6.

<sup>29</sup> Rebuttal Testimony of James S. Schaaf on Behalf of U S WEST Communications, Inc. before the Minnesota Public Utilities Commission, MPUC Docket No. P-999/M-97-909; OAH Docket No. 12-2500-11342-2 at 3-10 (Jan. 23, 1998).

<sup>30</sup> Rebuttal Testimony of Dr. Robert M. Bowman on Behalf of BellSouth Telecommunications, Inc. before the Alabama Public Service Commission, Docket No. 25980 at 5- 8 (Feb. 13, 1998).



18,000 feet beyond the digital loop carrier remote terminal without an extended line card is valid. Mr. Donovan had no substantive documentation for this assumption and was not aware of any ILEC that has in their network a design criteria working today with an 18,000-foot copper loop without an extended line card.<sup>31</sup>

As noted in GTE's Comments, this claim is inconsistent with the December 1997 Bellcore Notes on the Networks, the July 1997 Litespan Engineering Planning practice, and the Lucent Outside Plant Engineering Handbook, which all cite 12,000 feet as the CSA standard.<sup>32</sup> The Litespan Engineering Planning practice regarding Loop Plant Design clearly states that:

These (CSA) design rules call for non-loaded pairs (22-, 24-, or 26-gauge wire) with a maximum physical range of 12,000 feet (including bridged tap) or 750 ohms conductor loop resistance, whichever occurs first. In the case of 26-gauge wire, this equates to a maximum loop length of 9,000 feet. Any combination of two gauges is permitted. Today the CSA design rules ensure quality 2-wire voice transmission and the capability to support advanced digital services, including repeaterless digital data services (DDS), ISDN basic rate transmission (2B + D), high-bit rate digital subscriber line (HDSL), and asymmetrical digital subscriber line (ADSL).<sup>33</sup>

The Litespan Engineering Planning practice regarding Extended CSA Design/CDO Replacement goes on to say that "[i]t is strongly recommended, therefore, that RUVG2

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<sup>31</sup> Transcript of Mr. John C. Donovan on Behalf of AT&T Communications of the South Central States, Inc. before the Alabama Public Service Commission, Docket No. 25980 at 1706-1709 (Feb. 25, 1998).

<sup>32</sup> GTE Comments at 11.

<sup>33</sup> DSC Practice, Litespan Engineering and Planning, Issue 6 at 42 (July, 1997).

or REUVG channel units (*i.e.*, extended line cards) be used in any Litespan RT that may be serving any loops longer than 750 ohms.”<sup>34</sup> Therefore, AT&T’s and MCI’s statement that a standard line card is adequate is incorrect.

AT&T and MCI further contend that “no adjustment to the inputs or algorithms of the HAI model is necessary to estimate line card costs accurately.”<sup>35</sup> This is also incorrect. The inputs to the HAI Model would have to be adjusted if the Commission decides to use the HAI Model platform. As GTE explained in its Comments:

Although line cards will allow a loop to be extended up to 18,000 feet, they will not allow customers served by these lines to receive advanced services or use dial-up modems to their capacity. If the Commission chooses to consider extended line cards, the model must be able to identify which lines need extended line cards. The HAI Model cannot currently assign the costs of extended range line cards to those loops that require them, while BCPM can.<sup>36</sup>

Therefore, GTE urges the Commission to use the BCPM methodology, which incorporates a 12,000 foot copper loop length.

#### **IV. A COST MODEL SHOULD INCORPORATE DEPRECIATION RATES BASED ON THE ECONOMIC LIVES OF ILEC ASSETS.**

Numerous commenters agree with GTE that the existing Commission depreciation ranges are not forward-looking and do not reflect the economic lives of network assets.<sup>37</sup> The Commission’s depreciation ranges were developed to produce a

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<sup>34</sup> *Id.*

<sup>35</sup> AT&T/MCI Comments at 6.

<sup>36</sup> GTE Comments at 13-14.

<sup>37</sup> GTE Comments at 15-19; SBC Comments at 7; Joint Comments at 11-12; Ameritech  
(Continued...)

simple system and minimize costs, not to mimic economic depreciation lives. Thus, as explained both in GTE's Comments and in Exhibit 2 hereto, they are not suitable for use to determine depreciation in a competitive environment.<sup>38</sup>

Several state commissions have also agreed that the Commission's ranges do not yield economic depreciation rates. For example, the California Public Utilities Commission ("CPUC") has stated that:

We agree with Pacific that the schedules formally adopted in the represcription proceeding reflect the previous paradigm of the regulated monopoly environment, and so are difficult to justify in a cost study that looks forward to an environment in which there is local exchange competition. We also see little merit in the Coalition's original suggestion that we use FCC schedules. These schedules also reflect "the previous paradigm;" moreover, they are based on different assumptions and applied in different ways than our own. It also seems to be the case, however, that Pacific is now using these schedules in financial reports it is required to file, and thus for purposes of these cost studies, the schedules also appear consistent with generally accepted accounting principles. The schedules also appear realistic for a firm having to operate in a competitive environment, as Pacific will soon have to do. Accordingly, we will approve their use in this proceeding.<sup>39</sup>

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(...Continued)  
Comments at 3-5.

<sup>38</sup> GTE Comments at 15-16, Exhibit 2; SBC Comments at 7-10; Joint Comments at 8-10; Ameritech Comments at 4.

<sup>39</sup> Public Utilities Commission of the State of California Order, Decision 96-08-021, R.93-04-003, I.93-04-002 at 52 (Aug. 2, 1996). The Coalition mentioned in this passage includes AT&T, MCI, California Cable Television Association, and California Association of Long Distance Carriers, among others.

Notably, the CPUC also approved GTE's economic lives.<sup>40</sup>

The Missouri Public Service Commission also adopted economic depreciation lives, stating: "Staff's goal has been to recommend depreciation rates based on parameters that GTE is likely to experience for financial purposes so as to fully recover its long run capital costs in a timely fashion."<sup>41</sup> Similarly, the Michigan Public Service Commission has concluded that:

GTE proposes to reduce its asset lives in accordance with their economic lives ... The Staff's view is that GTE's proposed asset lives are largely consistent with a forward-looking approach and are reasonable ... The Commission finds that GTE's proposal related to depreciation is appropriate for TSLRIC purposes .... The Commission further finds AT&T/MCI's proposal to be insufficiently forward looking for purposes of a TSLRIC study.<sup>42</sup>

In addition, in considering a cost model for Michigan, the Michigan Commission found that Ameritech's proposed asset lives "are more reasonable than the FCC prescription lives."<sup>43</sup> Ameritech has filed a waiver request asking the Commission to permit use of the Michigan cost study for federal purposes, including the depreciation rates.<sup>44</sup> The

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<sup>40</sup> *Id.* at 75.

<sup>41</sup> Missouri Public Service Commission Final Arbitration Order, Case No. TO-97-63, Attachment C at 76 (July 31, 1997).

<sup>42</sup> Michigan Public Service Commission Order, Docket No. U-11281, Section d (Feb. 25, 1998).

<sup>43</sup> Michigan Public Service Commission Order, Docket No. U-11280 at 7 (Jan. 28, 1998).

<sup>44</sup> Ameritech Request for Waiver, CC Docket Nos. 96-45, 97-160 (filed May 26, 1998).

Public Service Commission of South Carolina has also ordered the use of economic lives.<sup>45</sup>

AT&T and MCI cite a number of state commissions that have adopted depreciation rates within the Commission's ranges. However, they fail to note that these states felt constrained by the Commission's requirement that, "[e]conomic lives and future net salvage percentages used in calculating depreciation expenses must be within the FCC authorized range."<sup>46</sup> For example, Dr. Edward Fagerlund on behalf of the Minnesota Department of Public Service commented that:

The Department is not aware of any support for the FCC authorized ranges being up-to-date estimates of the appropriate economic forward-looking rates to use in the cost models in this case. Thus, the use of these rates is a departure from the use of economic forward-looking parameters elsewhere in these models. Even if these lives were appropriate economic lives when they were adopted (FCC, *Third Report and Order*, Docket 92-296, May 4, 1995), there is no assurance that they are economic forward-looking rates for 1998.<sup>47</sup>

Thus, the fact that state commissions have used the Commission's lives is not an endorsement that they represent the economic lives of ILEC assets.

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<sup>45</sup> Public Service Commission of South Carolina Order, Docket No. 97-239-C, Order No. 98-322 at 59 (May 6, 1998).

<sup>46</sup> Federal-State Joint Board on Universal Service, 12 FCC Rcd 8776, 8914 (1997).

<sup>47</sup> Substitute Rebuttal Testimony and Exhibit of Edward Fagerlund, before the Minnesota Department of Public Service, Docket No. P999/M-97-909 at 35-36 (Jan. 23, 1998).

GTE also disagrees with AT&T's and MCI's assertion that competition will not affect the economic life of a firm's assets.<sup>48</sup> AT&T recognized the effect of competition on depreciation rates in 1984 when it explained to the Commission that:

AT&T Communications simply requests the Commission to permit AT&T Communications to implement the depreciation practices required in a competitive world. While the underlying function of depreciation is to allocate the full cost of an asset over its economic life, the way that allocation is made, and thus the appropriate depreciation methods, are fundamentally different for a competitive firm than for a regulated monopoly .... AT&T Communications and this Commission can no longer afford the luxury of further deferral of capital recovery .... AT&T Communications must use now the depreciation methods required by the competitive marketplace ....<sup>49</sup>

Similarly, in petitioning the Commission to use financial reporting ("FR") lives in 1988, AT&T explained that:

By setting AT&T's depreciation expenses on the basis of AT&T's FR amounts, the Commission staff can rely on the attestation and evaluation of AT&T's independent auditors (and the SEC's regulatory oversight) that AT&T's FR depreciation rates and reserves reliably reflect the economic lives of the plant assets in accordance with GAAP.<sup>50</sup>

GTE's proposed lives are longer or similar to the lives used by AT&T and MCI for the same types of equipment. For the same reasons that AT&T needed to use economic lives once competition began in the long distance market, ILECs must use

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<sup>48</sup> AT&T/MCI Comments at 12.

<sup>49</sup> Petition of American Telephone and Telegraph Company for Prescription of Depreciation at 3-5 (filed May 11, 1984).

<sup>50</sup> Petition of American Telephone and Telegraph Company, AAD 9-1935 at 27 (filed Feb. 15, 1989).

economic lives for depreciation now that competition has begun in the local exchange market. Clearly, the Commission's depreciation ranges do not represent the economic lives of assets; if they did, AT&T and MCI would use these lives in their own financial reporting. Because, as GTE has shown, AT&T and MCI use significantly shorter lives, their protestations that the Commission's ranges are reasonable ring hollow.

As GTE explained in its Comments,<sup>51</sup> the Commission should allow ILECs to set depreciation lives based on the expected economic life of an asset. Requiring ILECs to use the same depreciation rates and salvage values in a cost model as they use for financial reporting will prevent ILECs from using unreasonably short rates or low salvage values. However, if the Commission continues to regulate depreciation rates, it should develop a range of depreciation rates for ILECs using the same methodology as is used for cable television operators. ILECs should be allowed to select their own depreciation rates as long as they fall within this range and are not inconsistent with the values the ILECs use for financial reporting.

**V. THE HAI MODEL INPUT VALUES DO NOT REPRESENT ACCURATELY THE COSTS INCURRED BY CARRIERS PROVIDING BASIC SERVICE.**

Commenters generally agreed that input values for outside plant must reflect: (1) company-specific data and (2) geographic differences in terrain within wire centers, as well across the nation.<sup>52</sup> Some commenters also explained the numerous problems

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<sup>51</sup> GTE Comments at 15-19.

<sup>52</sup> GTE Comments at 19-25; Comments of Sprint Local Telephone Companies, CC Docket Nos. 96-45, 97-160 at 2-4 (filed June 1, 1998) ("Sprint Comments"); Comments (Continued...)

with the default inputs used by the HAI Model and that these inputs do not reflect the actual costs of any carrier.<sup>53</sup> As the South Carolina Public Service Commission has confirmed, the “default inputs contained in HM 5.0a do not contain information specific to this state and, accordingly, cannot possibly reflect the forward-looking cost of providing high quality telephone service for South Carolinians.”<sup>54</sup> Carrier-specific inputs on a state basis are critical to ensuring that a cost model produces accurate estimates of the costs of providing universal service across states. The fact that costs vary by state is demonstrated by the different input values for BCPM that BellSouth has developed for the states that it serves.<sup>55</sup>

In their comments, AT&T and MCI claim that they have “exhaustively demonstrated the efficacy of the Hatfield Model’s key default input values.”<sup>56</sup> Further, they also state that they have “demonstrated the accuracy and reliability of the HAI Model and its inputs through numerous *ex parte* filings with Commission staff members”<sup>57</sup> and have shown that “the arguments and evidence presented by the HAI

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(...Continued)  
of BellSouth Corporation, CC Docket Nos. 96-45, 97-160 at 3-4 (filed June 1, 1998) (“Bellsouth Comments”); GTE Comments at 20; Comments of U S WEST Communications, Inc., CC Docket Nos. 96-45, 97-160 at 2 (filed June 1, 1998) (“U S WEST Comments”).

<sup>53</sup> GTE Comments at 20-25, Exhibit 3; SBC Comments at 19-21.

<sup>54</sup> South Carolina PSC Order at 59.

<sup>55</sup> BellSouth Comments, Attachment 1.

<sup>56</sup> AT&T/MCI Comments at 1.

<sup>57</sup> AT&T/MCI Comments at 2.



sponsors in support of these input values have never been refuted.”<sup>58</sup> These statements are flatly inaccurate. GTE and numerous other commenters have submitted substantial criticisms of the HAI Model inputs throughout the Commission’s lengthy cost model proceeding.<sup>59</sup> Similarly, GTE has filed testimony in numerous state proceedings which detail the problems with the HAI Model input values.<sup>60</sup>

State commissions have also concluded that the HAI Model’s input values have significant problems. For example, the Washington Utilities and Transportation Commission’s Eighth Supplemental Order clearly contradicts the statements propounded by AT&T and MCI in their comments, finding that “the Commission agrees with GTE that the method used by AT&T to collect data from vendors was flawed.”<sup>61</sup> In addition, the South Carolina Commission stated in its order that “Mr. Wells conceded

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<sup>58</sup> AT&T/MCI Comments at 2.

<sup>59</sup> See, e.g., Comments of GTE Service Corporation, CC Docket Nos. 96-45, 97-160 at 2-9 (filed Oct. 17, 1997); Comments of Bell Atlantic on Inputs, Expenses, and Other Issues, CC Docket Nos. 96-45, 97-160, Attachment (filed Oct. 17, 1997); Joint Comments of BellSouth Corporation, BellSouth Telecommunications, Inc., U S WEST, Inc., and Sprint Local Telephone Companies to Further Notice of Proposed Rulemaking Sections III.C.5, 7, 8 & III.D Platform III.B.3 & III.C All Input and IV and V, CC Docket Nos. 96-45, 97-160 at 4-8 (filed Oct. 17, 1997).

<sup>60</sup> See, e.g., Rebuttal Testimony of Francis J. Murphy on behalf of GTE, before the Alabama Public Service Commission, Docket No. 25704 (Feb. 13, 1998); Rebuttal Testimony of Francis J. Murphy on behalf of GTE South, Inc., before the Public Service Commission of South Carolina, Docket No. 97-239-C (Mar. 2, 1998); Rebuttal Testimony of Frank J. Murphy, before the Washington Utilities and Transportation Commission, Docket Nos. UT-960369, UT-960370, UT-960371 (Apr. 25, 1997).

<sup>61</sup> Comments of the Washington Utilities and Transportation Commission, CC Docket Nos. 96-45, 97-160, Eighth Supplemental Order Interim Order Establishing Costs for Determining Prices in Phase II; and Notice of Prehearing Conference at 25 (filed June 1, 1998).